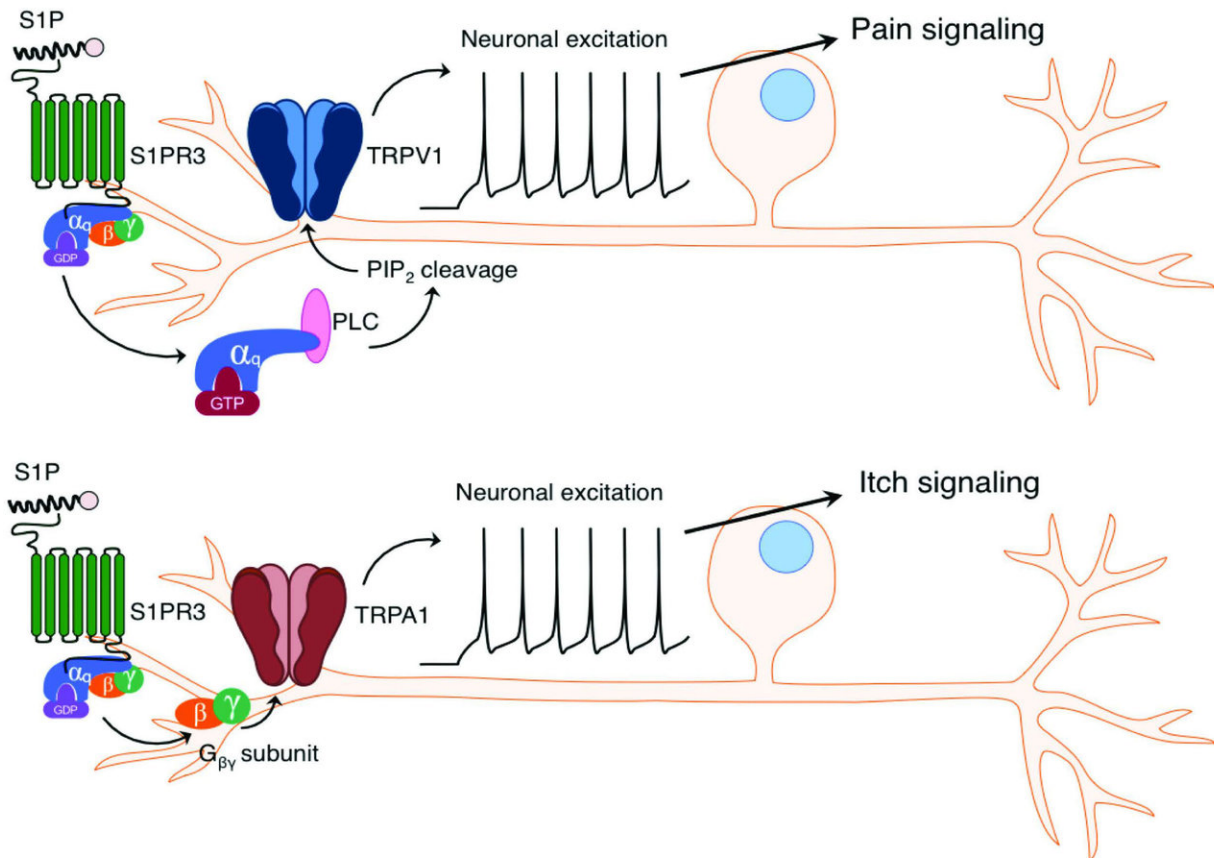


Molecular switch triggers itch

August 6 2018



Credit: Hill et al., *JNeurosci* (2018)

A new study of male mice published in *JNeurosci* uncovers two distinct pathways through which a single molecule can cause both itchy and painful skin. The research could inform the development of drugs for a variety of skin diseases.

Diana Bautista and colleagues show that sphingosine 1-phosphate (S1P)—a molecule implicated in skin conditions such as psoriasis as well as other [inflammatory diseases](#) including asthma and multiple sclerosis—triggers itch in addition to its known role in pain.

Their work identifies a receptor of this molecule, S1PR3, expressed in [sensory neurons](#) is responsible for these sensations.

The findings suggest that blocking this receptor may represent a promising therapeutic approach for managing both pain and itch.

More information: Rose Z. Hill et al, S1PR3 mediates itch and pain via distinct TRP channel-dependent pathways, *The Journal of Neuroscience* (2018). [DOI: 10.1523/JNEUROSCI.1266-18.2018](https://doi.org/10.1523/JNEUROSCI.1266-18.2018)

Provided by Society for Neuroscience

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